

REMARKS

This paper is being filed in response to the Notice of Non-Compliant Amendment (37 C.F.R. §1.21) dated September 25, 2001. In the notice, the Examiner states that the Preliminary Amendment filed on July 31, 2001 is non-compliant because: (i) the amendment does not include a marked-up version of the replacement paragraph(s)/section(s); and (ii) the amendment does not include a marked-up version of the amended claim(s). Pursuant to the Notice, Applicants submit herein a "marked-up" version of each replacement paragraph according to the provisions of MPEP §§ 714 and 1302.04. In regard to the amended claims, Applicants respectfully submit that a "marked-up" version of the claims is not required since originally filed claims 1-9 have been canceled and new claims 10-28 have been added.

Applicants do not believe that a fee is necessitated by this response. However, if a fee is deemed necessary, the Commissioner is hereby authorized to charge payment of any fees associated with this communication to Deposit Account No. 04-0822.

Respectfully submitted,

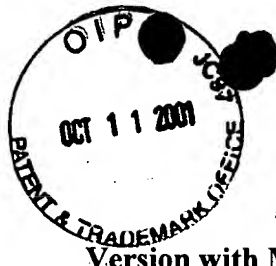
DERGOSITS & NOAH LLP

Dated: October 8, 2001

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ATTACHMENT A

Version with Markings to Show Changes Made

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IN THE SPECIFICATION

On page 1, at lines 5-9, the first paragraph after the title has been **rewritten**, as follows in the **marked-up version** of this paragraph:

This application is a continuation of copending U.S. Patent Application Serial No. 09/660,208, filed on September 12, 2000, which is a divisional of U.S. Patent Application Serial No. 08/574,999, filed December 1995, now U.S. Patent No. 6,224,681, which is a File Wrapper Continuation of application number 08/278,984, filed July 22, 1994, now abandoned, which is a File Wrapper Continuation of original application number 07/990,755, filed December 15, 1992, now abandoned, which are all incorporated by reference. This application is related to previously-filed copending U.S. Patent Application Serial No. 07/912,024, filed July 9, 1992, (now U.S. Pat. No. 5,419,924), which is a continuation of Serial No. 07/626,274, now abandoned.

On page 4, line 5, after "evaporation" the phrase --by heating-- has been **inserted**. The resulting **marked-up version** of the paragraph spanning lines 3-7 of page 4 is provided below:

An advantage of the invention is that the vaporizer forms vapor by expansion in a pressure gradient, rather than evaporation by heating, and therefore can vaporize liquid at high flow rates such as those needed for some semiconductor fabrication processes.

On page 6, line 24, after "can" the word --be-- has been **inserted**. The **marked-up version** of the resulting paragraph spanning lines 19-25 of page 6 is provided below:

Remotely controllable (e.g., pneumatic) valves 13 and manual valves 15 are inserted on each line. These valves are opened and closed to enable normal operation and purge and evacuation operations. To enhance safety and fault-tolerance, each line having a remotely controlled valve 13 also has a manual valve 15 which can be closed manually if the remotely controlled valve fails.

On page 7, line 24, after "0-30" the abbreviation "m" has been **replaced** with -- μ m--.

The **marked-up version** of the resulting paragraph spanning lines 16-29 of page 7 is provided below:

The piezo valve may be implemented with a commercially available piezo-electric valve, such as model IV1000 or IV2000 type, obtainable from STEC, Kyoto, Japan. In one embodiment, the valve typically operates at a flow rate of 0.3-0.6 grams/minute, in which case the gap between the diaphragm 54 and opening 49 is approximately 10 μ m. (Excessive gap height can cause undesirable turbulence in the control valve bore 50.) In this embodiment, the piezo-electric valve can be selected to provide a 0-30 μ m [m] gap adjustment range, e.g., at an input voltage of 0 Volts, the gap is 0 μ m, at an input voltage of 5 Volts, the gap is 10-15 μ m, and at an input voltage of 15 Volts, the gap is 30 μ m. Thus, the piezoelectric valve not only provides liquid flow control, but can also operate temporarily to fully shut off liquid flow.

On page 8, line 12, after "61" the phrase --(Fig. 2D)-- has been **inserted**. On page 8, line 14, a typographical error has been corrected by **replacing** "aslo" with --also--. On page 8, line 16, the word "steal" has been **replaced** with --steel-- to correct another typographical error. The **marked-up version** of the resulting paragraph spanning lines 7-22 of page 8 is provided below:

Referring to FIG. 2B, gas inlet port 36 is connected by passage 58 through valve body 42 to control valve bore 50. Outlet port 60 is connected by passage 62 through valve body 42 to the control valve bore 50. Housing 57 retains the diaphragm 54 in proximity to the valve body 42. Diaphragm 54 has a cylindrical center piston 61 (FIG. 2D) which is positioned parallel to, and an adjustable close spacing from, the surface of valve seat 53. Diaphragm 54 also [aslo] has a thick annular edge 63 which rests on a circular lip 56 formed in the valve body 42. Diaphragm 54 is manufactured of stainless steel [steal] or a similarly flexible metal. Movable "spider" portion 59 of diaphragm 54 comprises a thin (e.g. 40-50 mil), elastic, annular sheet or membrane connecting the thick annular edge 63 and the cylindrical center piston 61. Annular O-ring seal 55 couples to the annular edge of diaphragm 54 and thereby contains the vapor/carrier mixture within valve bore 50.

IN THE CLAIMS

Since the Preliminary Amendment filed on July 31, 2001 canceled originally filed claims 1-9 and added new claims 10-28, Applicants believe that no "marked-up version" is required.

ATTACHMENT B

Copy of Preliminary Amendment Filed on July 31, 2001

a gas inlet port for receiving said carrier gas, said gas inlet port connected to said first aperture through a first fluid channel;

a liquid inlet port for receiving the liquid, said liquid inlet port connected to said second aperture through a second fluid channel;

a valve mechanism including a valve element disposed adjacent to and opposite said valve seat, said valve element being continuously adjustable by said valve mechanism over a continuous range of settings between and including a fully closed position and a fully open position; and

an outlet port connected to said third aperture through a third fluid channel,

the valve body defining a first volume in adjustable, fluid communication with a second volume through the valve seat wherein during normal operation the pressure in the first volume is different than the pressure in the second volume;

- b) providing sources of liquid and carrier gas;
- c) vaporizing liquid in the valve seat by operating the valve and sources such that there is a change in pressure from the liquid inlet to the vapor outlet.--

REMARKS

The present application is a continuation application under 37 C.F.R. §1.53(b) of copending Application Serial No. 09/660,208, which is a divisional of Application Serial No. 08/574,999 ("the '999 application"), now U.S. Patent No. 6,224,681. The parent application to the '999 application was originally filed on December 15, 1992 as U.S. Pat. App. Ser. No. 07/990,755 ("the '755 application"). The parent '755 application was abandoned in favor of a first File Wrapper Continuation Application, U.S. Pat. App. Ser. No. 08/278,984. This first File Wrapper Continuation Application was subsequently abandoned in favor of a second File Wrapper Continuation application, the original '999 application. On November 19, 1998, a Notice of Allowability was issued granting 24 claims, numbered as claims 24-47, of the '999 application.

The original '999 application was abandoned in favor of a first Continued Prosecution Application ("first CPA") that was filed on March 30, 1999. In this first CPA, the 24 claims that

had been allowed in the previous '999 application were canceled without prejudice to refile a new set of 25 claims, numbered as claims 48 – 72, was submitted. A Notice of Allowability for claims 48 – 72 was mailed on June 24, 1999.

On September 24, 1999 , Applicants abandoned the first CPA of the '999 application in favor of a second Continued Prosecution Application ("second CPA"). Claims 48-72, which had been allowed in the first CPA application, were also submitted with the second CPA. However, through an error of the Patent Office, the abandoned first CPA mistakenly issued as U.S. Pat. Ser. No. 5,976,262 on November 2, 1999. The PTO withdrew U.S. Pat. Ser. No. 5,976,262 from issue on November 2, 1999. On June 16, 2000 the Examiner allowed claims 48-72 of the second CPA of the '999 application.

Upon entry of the claims presented above, claims 10-28 will remain pending in the above-referenced patent application. In this Preliminary Amendment to the continuation application, Applicant has canceled claims 1-9 and added new claims 10–28. However, claims 10–28 are similar in scope to previously-allowed claims 24–47, which were canceled without prejudice in the June 17, 1999 Preliminary Amendment to the first CPA application. The Preliminary Amendment additionally corrects several typographical errors that were previously corrected in the parent patent application. No new matter has been added as a result of this Preliminary Amendment.

All of the limitations of new claims 10-28 are clearly supported by the specification according to the present invention. Claims 10-28 are, therefore, allowable.

CONCLUSION

Applicant respectfully submits that Claims 10-28 are now in condition for allowance. The Examiner is encouraged to call the undersigned collect at (415)705-6377 if there are questions, or if it will expedite allowance of this application. The Commissioner is hereby authorized to charge payment of any fees associated with this communication or credit any overpayment to Deposit Account No. 04-0822.

Respectfully submitted,

DERGOSITS & NOAH LLP

Dated: July 31, 2001

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